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Perceptions of Australian physiotherapy students about the potential implementation of physiotherapist prescribing in Australia: a national survey

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ABSTRACT

Objectives To explore the perceptions of Australian physiotherapy students about (1) the potential implementation and use of non-medical prescribing by physiotherapists in Australia and (2) how physiotherapist prescribing might impact the care that the physiotherapy profession can provide in the future.

Design A cross-sectional descriptive survey of physiotherapy students across Australia was completed using an online questionnaire developed by subject-experts and pretested (n=10) for internal consistency. A hyperlink to the questionnaire was emailed to all students enrolled in any accredited, entry-level Australian university physiotherapy programme. A reminder email was sent 4 weeks later.

Setting Participants completed an online questionnaire.

Participants 526 physiotherapy students from universities across all states with entry-level programmes.

Outcome measures Quantitative data underwent primary descriptive analysis. Thematic analysis was used to synthesise qualitative data.

Results 87% of participants supported the introduction of physiotherapist prescribing in Australia. 91% of participants stated that they would train to prescribe following introduction. Participants identified improvements in clinical and cost effectiveness, timely access to appropriate prescription medicines and optimisation of quality healthcare as key drivers for the introduction.

Conclusions Student physiotherapists support the introduction of physiotherapist prescribing in Australia, reporting potential benefits for patients, health services and the physiotherapy profession. Stakeholders should use the results of this study in conjunction with supporting literature to inform future decisions regarding physiotherapist prescribing in Australia.

Strengths and limitations of this study

- First survey of student physiotherapists investigating their perceptions about the potential implementation of physiotherapist prescribing in Australia.
- This evidence is required by the physiotherapy profession, politicians and educational institutions to inform the future direction of the profession in Australia.
- Selection and response bias are inherent in all survey research.
- Researchers were unable to identify the reasons for participant non-response.

INTRODUCTION

The ever-increasing healthcare requirements of the Australian population require additional healthcare workers across all disciplines.[1] The necessity for the physiotherapy workforce to meet the demands of the growing and ageing population requires the training of new physiotherapists alongside retention of senior physiotherapists with advanced clinical expertise.[1] Increasing numbers of junior physiotherapists are being educated through traditional and contemporary entry-level physiotherapy programmes across Australia,[2] resulting in physiotherapy being the third largest healthcare profession nationally.[3] Although attrition through retirement is inevitable, anecdotal evidence suggests a high-level of attrition in the early years following qualification owing to burnout, stress or ill health, family responsibilities or dissatisfaction with the profession.[1 3 4] Research demonstrates that a perceived lack of clinical and professional support, limited potential for promotion or formal career progression, alongside poor professional recognition and low remuneration contributes to 30% of clinicians being dissatisfied with their roles.[3]

The mounting prevalence of complex, chronic disease alongside the ageing and growing population in Australia is increasing the burden on healthcare systems.[5]

Innovation in practice is required to meet increasing demands, with many health professionals now working with an extended scope of practice.[6] Advanced physiotherapist roles have been introduced internationally, enabling innovative evidence-based care to optimise patient outcomes and develop the profession so that it is fit for the future.[7–10] In Australia, advanced musculoskeletal practitioners have been introduced to orthopaedic interface-services and emergency departments.[11] A recent systematic review examining the substitution of medical doctors for physiotherapists in the management of musculoskeletal disorders has supported this expansion of roles, with physiotherapists demonstrating parity of clinical outcomes with orthopaedic surgeons, with greater patient satisfaction.[9] Following the introduction of independent physiotherapist prescribing in the UK,[12] a proposal for the endorsement of registered physiotherapists as autonomous prescribers has been submitted to the Physiotherapy Board of Australia,[13] aiming to further address health service inefficiencies and improve access to medicines for all Australians, across all communities regardless of their geographical location[13]; as well as improving clinicians' job satisfaction, leading to increased retention of skilled physiotherapists.[13] However, conflict within a profession has been recognised as a significant barrier to successful implementation of non-medical prescribing (NMP).[14] Early identification of views and perceptions of both current practitioners and the next generation of physiotherapists is therefore required. To date, no research has evaluated the alignment between student physiotherapists and the greater profession with regard to the introduction of physiotherapist prescribing in Australia. It is therefore imperative that the views of the next generation of physiotherapists are explored as the Australian physiotherapy profession takes steps towards introducing physiotherapist prescribing responsibilities.

OBJECTIVES

To explore the perceptions of Australian physiotherapy students about the:

1. Potential implementation and use of NMP by physiotherapists in Australia.
2. How physiotherapist prescribing might impact the care that the physiotherapy profession can provide in the future.

METHODS

The study was conducted according to a predefined protocol[15] and is reported in accordance with the SUrvey Reporting GuidelinE[16] to ensure quality, reproducibility and transparency.[17] This article reports the data collected from student physiotherapists within a larger study evaluating the views and perceptions of Australian physiotherapists and physiotherapy students about the potential implementation of physiotherapist prescribing in Australia.[15] The data from Australian registered physiotherapists arefound in the related manuscript; perceptions about the implementation of physiotherapist prescribing in Australia: a national survey of Australian physiotherapists.[18]

Survey design

A cross-sectional descriptive survey design, using an online questionnaire enabled physiotherapy students from all geographical regions of Australia to participate at a convenient time.[19–21]

Participants

Students enrolled in any accredited, entry-level Australian university physiotherapy programme leading to Australian Health Practitioner Regulation Agency (AHPRA) registration as a physiotherapist, with legal capacity to consent, and who were able to read and understand written English, were eligible to participate. Data published by the Physiotherapy Board of Australia reported 8943 student physiotherapists enrolled across 20 Australian universities at the time of data collection.[22]

Procedure

A link to the online survey was distributed by university departments to students via an email endorsed by the Council of Physiotherapy Deans Australia and New Zealand. Student members (n=6973) of the Australian Physiotherapy Association (APA) also received the advertisement via the APA's electronic-communications.[23] A reminder email was sent via the same channels 4 weeks later.[19–21] Data collection took place between 1 March 2017 and 30 April 2017 during university term time to facilitate recruitment, using online survey software, Qualtrics (Qualtrics, Provo, Utah, USA).[24] Participation was voluntary, with consent sought online following provision of information describing rationale, content and dissemination plans. All data provided by participants were confidential.

Questionnaire

A short, context specific questionnaire taking 5–10 min to complete was designed to maximise recruitment and minimise bias.[21 24 25] For transparency and reproducibility, a full version of the questionnaire including inbuild logic is found in online supplementary file 1. Questions were formulated from findings of a mixed methods systematic review evaluating the barriers to and facilitator of NMP, identifying personal and professional factors that could influence the implementation.[14] Student physiotherapists were directed via inbuild logic, to the specific questions designed to evaluate their views. Questions were categorised into four sections:

1. Demographic data including age, gender and state in which participants attend university.
2. Participants' perceptions of the positive and/or negative aspects of physiotherapist prescribing with regard to the profession.
3. Participants' perceptions of the impact of physiotherapist prescribing to them as an individual.

4. Participants' perceptions of the potential wider impacts of physiotherapist prescribing.

Experts in the fields of physiotherapy, NMP and Australian state/federal law/health policy were consulted to ensure optimal use of questions.[17 20] Pilot testing using a purposive sample of registered and student physiotherapists (total n=10, registered physiotherapists n=7, student physiotherapists n=3) was used to evaluate interpretation of instructions and questions and minimise reasons for a poor response rate.[17 20 21] Pilot participants were not excluded from the definitive survey.

Data management

Computer password protection and coding of any disclosed personal details within data files, were used to protect all electronic data produced. Data were only accessible to study investigators.[17 20 21] Data will be securely retained for 10 years in line with university policies.

Data analysis

Only data from fully completed questionnaires were analysed. Demographic data were tabulated.[20 21] Data retrieved in sections 2 and 3 were summarised via primary descriptive analysis completed using IBM SPSS Statistics for Macintosh V.22.0.[20 21] Thematic analysis was used to synthesise the qualitative data collected from open questions in section 4, enabling the identification of themes and subthemes. One researcher (TDN) independently coded the participants' answers line-by-line using NVivo V.11 software (QSR International, Melbourne, Australia). Preliminary themes and subthemes were reviewed by two researchers (TDN and TJ), then scrutinised by a panel of experts to ensure consensus.[26]

Patient and public involvement

Patient and public health priorities identified in the literature were key in the development of the research objectives and research design. As the study aimed to explore the perceptions of Australian physiotherapy students, the general public were not involved in the design/recruitment processes. Instead, registered physiotherapists, student physiotherapists and methodological experts were used. The results will be disseminated through publication and presentation at professional conferences.

RESULTS

Of the 8943 student physiotherapists enrolled at Australian universities at the time of the survey, 526 (6%) fully completed the online questionnaire.

Demographics

Demographic data are presented in table 1. 56.8% of participants were female with the majority (n=470, 89.4%) aged below 30 years. All states and territories with at least one university offering an entry-level physiotherapy programme were represented (no physiotherapy programmes existed in the Northern Territory or Tasmania at the time of data collection).

Table 1 Demographic data

Demographic	Student physiotherapists, n (%)
Total participants	526 (100)
Gender	
Male	227 (43.2)
Female	299 (56.8)
Age (years)	
17–29	470 (89.3)
30–39	42 (8.0)
40–49	12 (2.3)
50–59	2 (0.4)
60+	0 (0.0)
University State or Territory	
Australian Capital Territory	36 (6.9)
New South Wales	139 (26.4)
Northern Territory	0 (0.0)
Queensland	79 (15.0)
South Australia	123 (23.4)
Tasmania	0 (0.0)
Victoria	75 (14.3)
Western Australia	74 (14.1)

Participant perceptions of positive and/or negative aspects of physiotherapist prescribing with regard to the profession

Four hundred and thirty-eight (87%) participants strongly agreed (n=262, 52%) or agreed (n=176, 35%) that autonomous prescribing responsibilities should be introduced for physiotherapists in Australia, with 35 participants disagreeing (n=29, 6%) or strongly disagreeing (n=6, 1.2%) (figure 1). Benefits and concerns from participants are summarised in figure 1. Key benefits were directly linked to patients: potential improvement in the efficiency of service delivery (n=434, 83%), reduced costs of healthcare delivery for patients (n=337, 64%), improving the overall patient experience (n=335, 64%), and improved access to medicines (n=267, 51%). Participants identified additional potential benefits to be the reduction in currently overloaded general practitioners' (GPs) caseloads with a more collaborative approach to healthcare. Concerns focused on a lack of base-level pharmacological knowledge required to successfully complete an NMP course (n=210, 40%) and the potential increased safety risks to the patient (n=173, 33%). Additional comments highlighted a perceived lack of acceptance by older, more experienced physiotherapists, and potential conflict between the medical and physiotherapy professions due to the blurring of traditional roles.

Three hundred and fifty-seven participants (53%) felt that 1–5 years of clinical experience as a physiotherapist was necessary prior to being able to undertake an NMP course, with 41 participants (8%) feeling that >5 years would be preferable. One hundred and seventy-eight

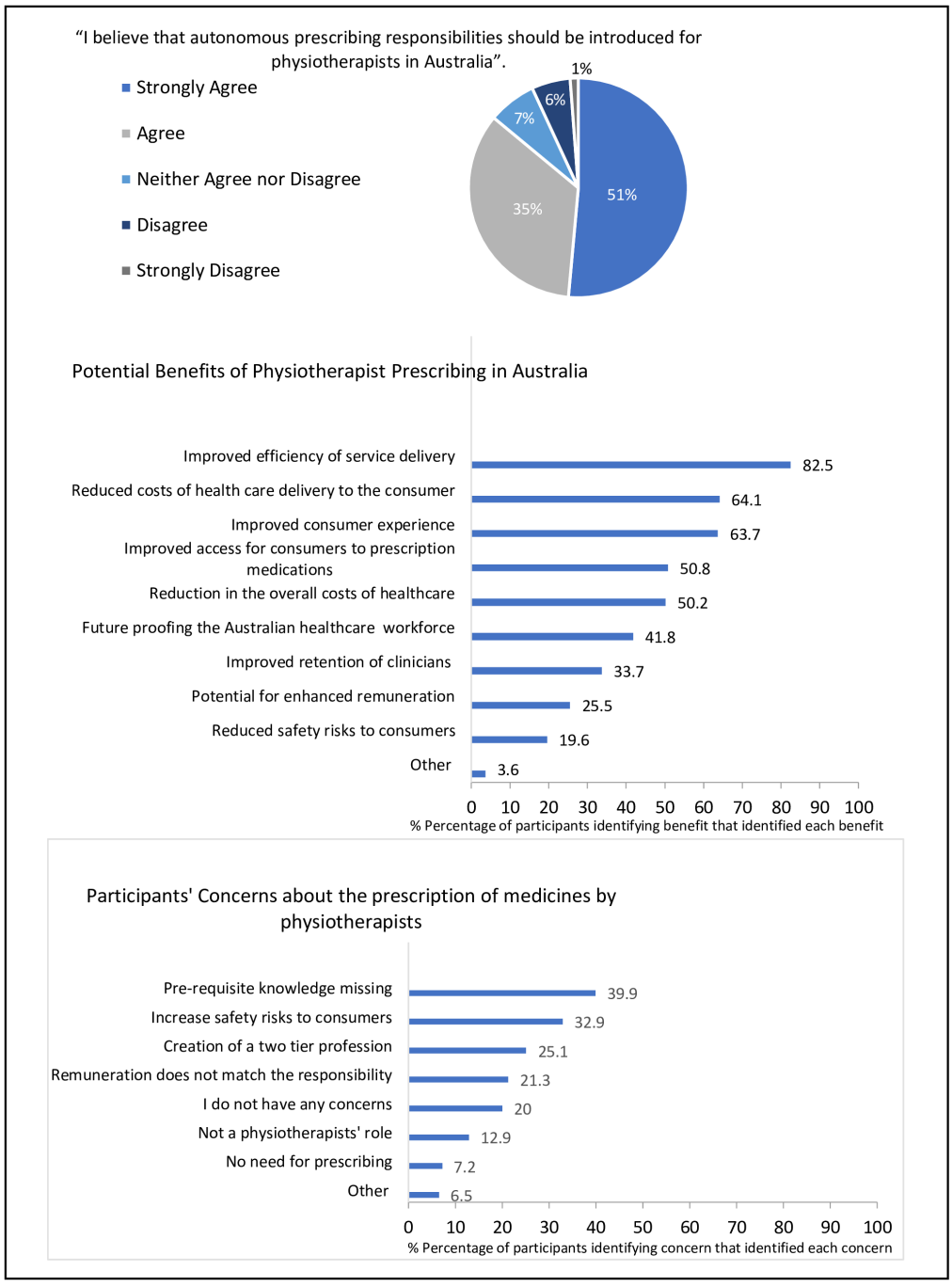

Figure 1 Graphs and charts showing agreement with the introduction of autonomous prescribing responsibilities, potential benefits and physiotherapists concerns.

participants (36%) reported that prescribing should be included in entry-level physiotherapy programmes; consistent with medicine and dentistry.

Participants' perceptions of the impact of physiotherapist prescribing to them as an individual

Figure 2 demonstrates the likelihood of the participants to want to train as a physiotherapist prescriber should a change in Australian federal and state or territory laws and regulations allow. Four hundred and forty-three participants (91%) stated that they were extremely likely (n=335, 69%) or somewhat likely (n=108, 22%) to want to complete an NMP course, with only 25 participants (5%) reporting that they were somewhat unlikely (n=18, 4%) or extremely unlikely to (n=7, 1.4%). The motivating factors and deterrents to pursuing autonomous prescribing responsibilities identified by the participants are detailed in figure 2. The potential for improvements in quality of care (n=450, 97%), alongside improved job satisfaction (n=246, 53%) and strengthened professional reputation (n=310, 67%) were identified as key

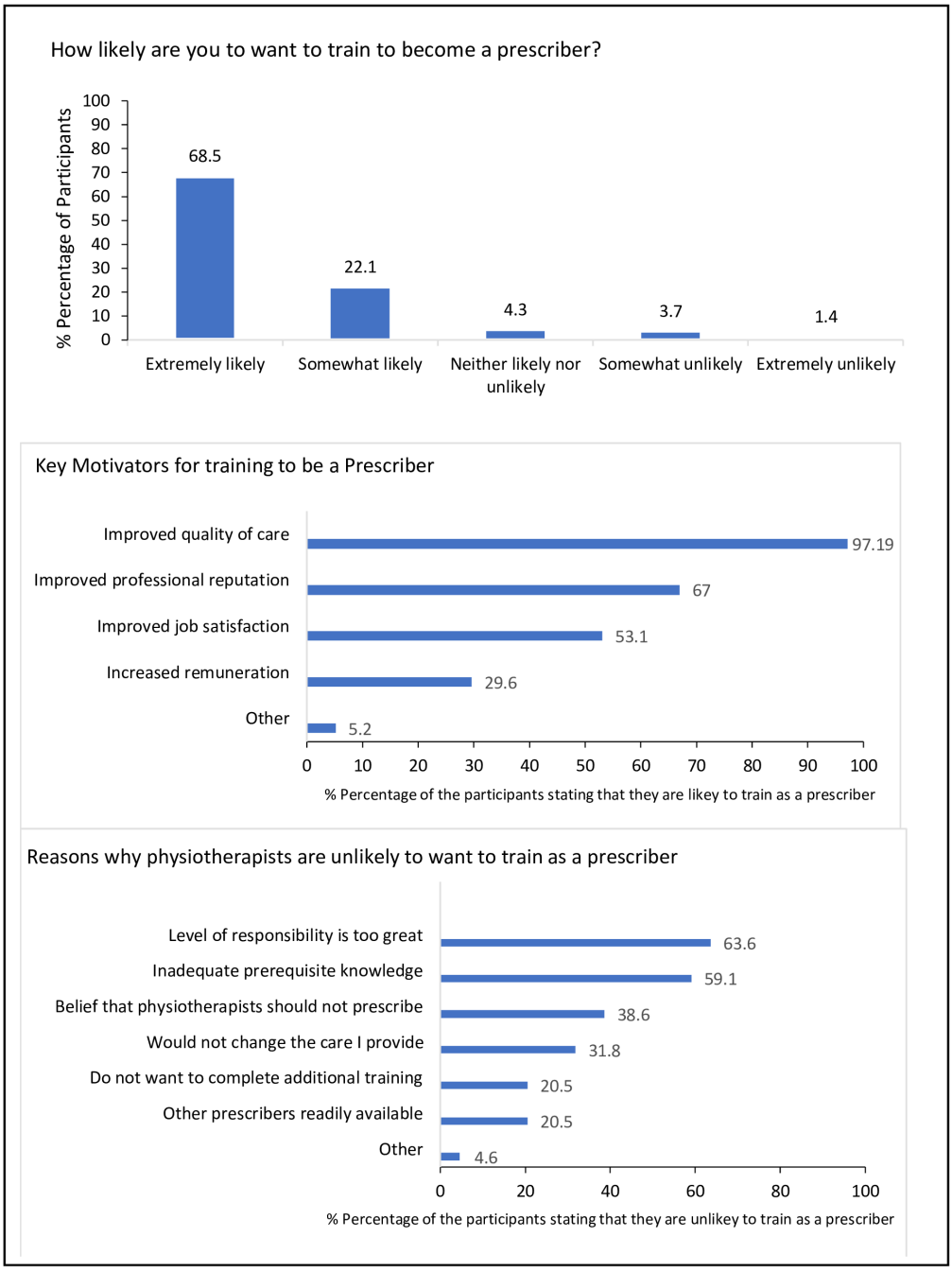

Figure 2 Training to be a physiotherapist prescriber: motivators and deterrents.

motivational factors. Of those that stated that they would not want to train as a prescriber, key reasons were identified as the level of clinical responsibility (n=28, 64%) and inadequate prerequisite knowledge required to successfully enter and complete an NMP course (n=26, 59%). Participants also highlighted a lack of remuneration for increased stress and responsibility.

Participants' perceptions regarding the potential wider impacts of physiotherapist prescribing

Participants' perceptions about how physiotherapist prescribing might 'impact the care which the profession is able to provide' were analysed and synthesised into three themes:

1. Clinical and cost efficiency.
2. Access to prescription medicines.
3. Quality of care.

Table 2 provides illustrative quotations to demonstrate each theme.

Clinical and cost efficiency

Sixty-one participants commented on the potential for physiotherapist prescribing to improve clinical and cost effectiveness for physiotherapy consumers and

Table 2 Comments that reported or discussed each theme and illustrative quotations from participants (quotations have been copied verbatim)

Theme	Comments (n)	Illustrative quotations
Clinical and cost efficiency	61	"It will reduce secondary referrals, increase the time doctors in hospitals or GP's can be dealing with other more major illness and reduce burden on the client" (Participant 234) "This is extremely positive for a patient's healthcare costs" (Participant 78) "It will save people the trouble from moving back and forth between General practitioners and Physiotherapists" (Participant 132) "It will be beneficial as patients will not have to see a number of different healthcare/medical workers, streamlining the care they receive" (Participant 15)
Access to prescription medicines	17	"Patients would not have to wait extended periods of time to see their doctor to attain a prescription that their physio had already prescribed/deemed important for their rehabilitation" (Participant 67) "….improved medication prescription for immigrants whom physiotherapists often build closer relationships through therapy sessions compared with short medical consultations" (Participant 404) "It would positively influence those in rural/regional areas or with less access to healthcare" (Participant 497) "….could provide a positive impact especially those patients in lower income brackets, and time restricted not requiring a follow-up GP appointment as well as a physiotherapist appointment" (Participant 21)
Quality of Care	13	"I believe it would increase client satisfaction" (Participant 398) "I feel like it is always a good thing to have more tools available to you" (Participant 501) "Prescription should not take precedence over equally effective manual therapy or pain education" (Participant 65) "It will enhance care because the physio will be able to follow through on explanations of pain to the client—why it hurts, what they can do about it without using medication, and when they do need medication, the best kind and most efficient way to take it, considering the particular condition and particular level of pain they are experiencing" (Participant 178)

services. Participants felt that with the imminent burden that the ageing population will place on the Australian healthcare system, having physiotherapists that are able to prescribe appropriate medicines could reduce costs resulting from patients attending multiple appointments with multiple practitioners for the same problem. Furthermore, physiotherapists could provide a more holistic approach to treatment, providing a 'one-stop-shop' service for patients. Participants also felt that waiting times would be reduced by off-loading the burden on GPs, emergency departments and specialist services, allowing medical/surgical practitioners to concentrate on other cases. Specifically, participants suggested that the ability to prescribe analgesia would accelerate the recovery of patients with acute conditions presenting in primary care, complementing traditional physiotherapeutic skills, and minimising the risk of developing chronic pain. Participants noted that, ultimately, improvements in time efficiencies would lead to improvements in cost effectiveness for Medicare and private health insurers.

Access to prescription medicines

Seventeen participants reported that physiotherapist prescribing would improve access to prescription medicines. Where GPs and specialist medical practitioners have time pressures, physiotherapists could provide appropriate medications for their patients in a timely manner, being especially beneficial in rural and remote locations where access to other healthcare providers may be limited. Specifically, improved access for minority groups such as refugees and asylum seekers was conveyed. It was also noted that physiotherapist prescribers could improve access where physical disability limits travel and where financial barriers prevent multiple appointments with multiple clinicians.

Quality of care

Thirteen participants commented that the quality of care that physiotherapists are able to provide could be improved if physiotherapist prescribers were optimally used. Participants stressed that prescribing should not take precedence over effective manual therapy and pain education. However, when used in conjunction as part of holistic management, physiotherapist prescribing might enhance patients' recoveries. It was emphasised that by reducing the to-and-fro from GPs for medication reviews the patient-therapist relationship would be strengthened. This continuity of care could allow physiotherapists to modify medications in-line with the outcomes of other physiotherapeutic interventions.

Table 3 Comments that reported or discussed each theme and illustrative quotations from participants (quotations have been copied verbatim)

Theme	Comments (n)	Illustrative quotations
Risks and responsibilities	37	"Unless a central database was made for every prescriber (doctor and physio) to access the patients complete drug history, it could become another way of people abusing the system and gaining more access to medicines than is necessary" (Participant 22) "There needs to be intense training and accreditation processes which assist physios with gaining the correct accreditation in order to prescribe medications. With this in place it has the ability help patients obtain better quality of care" (Participant 3) "Opens a window for error and serious complications" (Participant 215)
Education	19	"Unless physiotherapists undergo extensive study in relation to medications and prescribing them, I do not think it will be safe for the client" (Participant 144) "There should also be CPD requirements to uphold the prescribing rights" (Participant 51) "I believe that within the 5 year course of Physiotherapy that I am studying, there is room to acquire the knowledge to become a non-medical prescriber" (Participant 250) "I think pharmacology subject need to be one of the core physiotherapy modules in all Australian universities" (Participant 399) "Adding therapeutics to the curriculum might put people off studying physio due to extended course duration" (Participant 412)
Professional Relationships and Credibility	11	"I don't believe it would decrease the cross-referral to Medical Doctors, but it would certainly enhance our credibility with our patients and reduce unnecessary or excessive visits to the doctor" (Participant 501) "People will take us more seriously than before" (Participant 13) "It can have a negative impact on Physio as there can be physiotherapists who are negligent and prescribe the incorrect medications. There can also be physios who do not stick to their scope of practice giving the rest of the industry a bad name" (Participant 88) "…further enhances the reputations as primary care practitioners" (Participant 21)

Table 3 provides Illustrative quotations from participants.

Further Insights

Fifty-nine additional comments were received in response to the final open question. Three themes were identified:

1. Risks and responsibilities.
2. Education.
3. Professional relationships and credibility.

Risks and responsibilities

Thirty-seven participants described the increased risks and responsibilities that could occur with physiotherapist prescribing. Some participants stated that they chose to train as physiotherapists because they did not want the responsibility associated with the prescription of medicines that medical and dental practitioners carry. These participants worried that physiotherapist prescribing would reduce the use of other clinical skills such as exercise therapy. Other participants reported that they would happily take on the responsibility of prescribing, if remuneration reflected that of other autonomous prescribers such as medical practitioners. Participants also raised concerns about 'abuse of the system' by patients 'doctor shopping' to feed addiction, and physiotherapists driven by financial incentives. It was recognised that robust clinical governance, policies and procedures would be essential to limit poor practise, and that appropriate communication technology would be paramount in avoiding clinical errors, duplication of treatment and abuse of the system among healthcare professionals treating the same patient. Further, participants noted that any prescribing errors may be reported in the media, tarnishing the reputation of the profession as a whole.

Education

Nineteen participants commented on the educational requirements for physiotherapist prescribing. Participants recognised the need for a robust and accredited NMP programme that leads to registration with AHPRA as a physiotherapist prescriber. It was felt that prescribing should not be compulsory for all physiotherapists, and participants queried whether they possessed the prerequisite base-level knowledge of pharmacology to complete a prescribing course. Participants agreed that entry-level physiotherapy programmes should contain a compulsory preparatory pharmacology unit, however warned that this may deter potential candidates from applying to study physiotherapy. Participants studying longer (4–5 years) preregistration courses felt that these additional units could fit within the current curriculum. This was debated by those on shorter postgraduate entry-level programmes, who were concerned that these units would be taught to the detriment of other skills. Further, it was suggested that any proposed NMP qualification should be transferable internationally, to ensure that future generations of physiotherapists are able to gain experience outside Australia.

Professional relationships and credibility

Eleven participants raised the issue of interprofessional relationships and the credibility of the physiotherapy profession. Key thoughts centred around an improved professional image and increased credibility to the public, other health professionals and internationally. Participants were mindful that physiotherapist prescribing might cause conflicts between physiotherapists, medical professionals and pharmacists due to the blurring of professional boundaries but did not see this to be a deterrent.

DISCUSSION

This is the first study to explore the perceptions of student physiotherapists regarding physiotherapist prescribing in Australia. Most participants were positive about the potential introduction of autonomous physiotherapist prescribing due to benefits for patients, clinicians, the physiotherapy profession and the Australian health economy. The benefits to health consumers and services, such as improved clinical and cost effectiveness due to streamlined clinical-pathways, were perceived by participants as paramount, being more important than potential benefits to the profession, such as enhanced recognition. This concurs with the qualitative health literature evaluating the introduction of NMP by other professions, that report anecdotal improvements in clinical and cost effectiveness alongside excellent patient satisfaction as key elements to the successful long-term use of NMP.[27 28] However, a recent, rigorous systematic review of randomised controlled trials (RCTs) investigating the clinical and cost effectiveness of NMP, concluded that both the clinical and cost effectiveness of NMP currently remain unclear due to the existence of only a few inadequately powered unclear risk of bias trials, from a limited number of professions and clinical specialties.[29] This highlights the need for further trials with low risk of bias to rigorously assess the clinical and cost effectiveness of NMP.

The need for urgent and effective management of health inequalities and challenging shortfalls in doctors in rural and remote areas have been acknowledged in both the health literature and Australian health policy.[1 30 31] Improvements in access to medicines for all Australians due to the introduction of physiotherapist prescribing, especially those living rurally and minority groups, such as refugees and asylum seekers, was highlighted by participants. However, participants also echoed the findings of a rigorous systematic review investigating the barriers and facilitators of NMP, citing that improved access to medicines via the introduction of physiotherapist prescribing will require robust governance to ensure appropriate, quality and safe practice.[14] Participants' perceptions further concurred with the review's findings, acknowledging that divided opinions within the physiotherapy profession and conflicts with the medical profession would be inevitable if changes in scope were not managed effectively. This would compromise vital medical support and create barriers to the implementation of physiotherapist prescribing.

Over 90% of the student physiotherapists who completed the questionnaire stated that they would train to become a physiotherapist prescriber if prescribing rights were introduced, with potential improvements in quality of care identified as a key motivator. Greater job satisfaction and enhanced professional reputation were also highlighted as motivating factors, potentially improving retention of talented physiotherapists within the profession. This consensus among participants supports the hypotheses outlined within the profession's submission proposing the endorsement of registered physiotherapists as autonomous prescribers.[13] Although nurse prescribing has been shown to improve job satisfaction in senior clinicians, increased stress due to the level of responsibility associated with NMP has also been emphasised and is highlighted as a deterrent to training as a prescriber in the nursing and pharmacy literature.[14 32] Participants recognised that these deterrents may be mitigated by increased remuneration.[32–34] Further, enhancing remuneration alongside additional clinical responsibility may tackle interoccupational conflicts and competition due to pay inequalities reported in the health-sociology literature.[35] It is hoped that addressing inequalities in remuneration would facilitate professional equality between autonomous, diagnosing, treating and prescribing professions such as medicine, dentistry, optometry and physiotherapy, further strengthening quality, efficacy and collaborative patient management.

Unsurprisingly, the educational requirements supporting physiotherapist prescribing were an overt focus for the students. It was felt that prescribing should not be compulsory, with a small number of students identifying prescribing responsibilities as a reason for not pursuing a medical or dental career. The physiotherapy literature has identified the need for transformative practice and education to effectively equip the next generation of physiotherapists for a constantly developing healthcare industry.[2] The introduction of 'pharmacology and therapeutics' to all physiotherapy programmes to ensure prerequisite knowledge in preparation for postgraduate prescribing education may be a valuable initial step. However, educators should aim to prepare the profession for the future, developing a revolutionary education framework fit for the next generation of physiotherapists, while minimising the loss of time spent studying current evidence-based content. This will require innovation and contemporary programme design in consultation with those driving healthcare reform such as politicians, managers, insurers and patients.[2] The majority of the students felt that a prescribing qualification should follow a specific number of years of clinical experience. This was deemed essential for development of the physiotherapeutic assessment, treatment and reasoning skills required to ensure an holistic and multimodal approach

to patient management, emulating recommendations from the UK where physiotherapist prescribing is now established.[36 37]

This paper reports on the perceptions of physiotherapy students enrolled in educational facilities in Australia about the potential introduction of autonomous physiotherapist prescribing in Australia, and it is a subset of a larger study which also investigated the perceptions of registered physiotherapists.[15 18] When compared, both registered physiotherapists and student physiotherapists perceived that autonomous physiotherapist prescribing would lead to improved access to medicines, efficiency of services and reduced healthcare associated costs. Both shared similar concerns about prescribing practices and motivations for training to become a prescriber, however key differences existed regarding the reasons as to why a physiotherapist would be unlikely to choose to train as a prescriber. Registered physiotherapists recognised that prescribing might not enhance their individual roles especially if they already work closely with a prescriber or in a non-clinical role. They also worried about the practicalities of training to become a prescriber, noting additional stress and costs. The student physiotherapists focused on the increased clinical responsibility without enhanced remuneration, with some students recognising potential deficits in their knowledge that would limit their ability to complete an NMP course successfully. Decision makers using the results from this study when planning for the future should acknowledge these similarities and differences, integrating all viewpoints to ensure the success and longevity of the profession into the future.

Strengths and limitations

This is the first study investigating perceptions of student physiotherapists about physiotherapist prescribing, and it therefore provides important insights into the views and expectations of the next generation of Australian physiotherapists. The study was rigorous. As with all survey data, selection bias was potentially introduced by the distribution methods, as it is unknown whether the university departments were able to successfully distribute the link to the questionnaire to all students; and only student members of the APA received the additional advertisement via their electronic communications. There may have also been sharing of these links among student networks. The reasons why all physiotherapy students did not complete the online questionnaire are unknown; therefore, the level of bias remains unclear. It is possible that participants may have biased the results by completing the questionnaire multiple times. It is also plausible that the findings may be more representative of participants with stronger views, who were more motivated to participate, limiting generalisability. However, age and gender demographics were characteristic of the greater student physiotherapy population in Australia,[38] with students at universities across all states with preregistration physiotherapy programmes represented. Given this representative demographic profile, it is likely that the results are characteristic of the population studied. Due to the small number of study participants contributing to the qualitative data, the transferability of the thematic analysis may be limited. However, the themes agreed with those identified in the registered physiotherapist population, strengthening the likelihood of good transferability.

CONCLUSION

This rigorous survey has demonstrated that the next generation of physiotherapists support the introduction of physiotherapist prescribing in Australia. The students recognised the benefits to all stakeholders, highlighting improvements for patients and in turn, health services. It is anticipated that the introduction of physiotherapist prescribing may aid in retaining talent within the profession if the additional responsibility is supported and remunerated appropriately. Stakeholders should use the results of this study in conjunction with the supporting literature to inform planning that should not only focus on the introduction of physiotherapist prescribing but should be visionary, preparing the profession for the future. The development of a robust and contemporary education framework that will ensure quality and safe physiotherapist prescribing within a multimodal physiotherapeutic context is paramount. Low risk of bias RCTs are required to formally assess the clinical and cost effectiveness of physiotherapist prescribing across a range of clinical contexts.

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Contributors TDN is a clinical advanced practice physiotherapist and PhD candidate at the University of Birmingham (UK). ABR is a Reader in musculoskeletal rehabilitation sciences and lead supervisor. JFM is a professor of clinical pharmacy and cosupervisor. Both supervisors ensured the rigour of methods and analyses. CD is a professor of physiotherapy and TJ is an associate professor of physiotherapy at Macquarie University (Australia). All authors have contributed to the content of this article. TDN wrote the first draft of this article and has worked with all authors to develop subsequent drafts. All authors prior to publication gave final approval. Patients and the general public were not involved in this study.

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